

In another embodiment of the present invention, there is provided a method of inhibiting polymorphonuclear leukocyte polarization, chemotaxis and infiltration into tissue activated by a neutrophil chemoattractant in an individual by administering the pharmaceutical composition of the present invention to the individual. Preferably, the neutrophil chemoattractant is selected from the group consisting of N-acetyl-PGP, N-acetyl-PGX, N-methyl-PGX, N-methyl-PGP and small peptide chemoattractants containing proline and glycine. Still preferably, the pharmaceutical composition is administered at a concentration range of from about 1  $\mu$ M to about 100 mM, depending on the peptide.

In still another embodiment of the present invention, there is provided a method of treating an eye disease in an individual by administering the claimed pharmaceutical composition. Preferably, the pharmaceutical composition is administered at a concentration range of from about 1  $\mu$ M to about 100 mM, depending on the peptide. Representative eye diseases which can be treated using this method of the present invention include alkali-injured eye,

chemically injured eye or inflammatory diseases of the eye which are well known to those having ordinary skill in this art.

Other and further aspects, features, and advantages of the present invention will be apparent from the following description  
5 of the presently preferred embodiments of the invention. These embodiments are given for the purpose of disclosure.

### BRIEF DESCRIPTION OF THE DRAWINGS

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So that the matter in which the above-recited features, advantages and objects of the invention, as well as others which will become clear, are attained and can be understood in detail, more particular descriptions of the invention briefly summarized above  
15 may be had by reference to certain embodiments thereof which are illustrated in the appended drawings. These drawings form a part of the specification. It is to be noted, however, that the appended drawings illustrate preferred embodiments of the invention and therefore are not to be considered limiting in their scope.

Figure 1 shows the multimeric structure and molecular weights of antisense peptides which have been tested.

## 5 DETAILED DESCRIPTION OF THE INVENTION

The neutrophil chemoattractant, N-acetyl-PGP, plays a major role in the initiation of polymorphonuclear leukocyte (PMN) invasion into the alkali-injured eye. In the current study, sense-  
10 antisense methodology was used to develop complementary peptides as potential inhibitors of N-acetyl-PGP. The polarization assay was used to measure the potential chemotactic —response— of  
polymorphonuclear leukocytes to synthetic N-acetyl-PGP, the ultrafiltered tripeptide chemoattractants obtained from alkali-  
15 degraded rabbit corneas, or leukotriene B<sub>4</sub>. Inhibition was expressed as the peptide concentration required to produce 50% inhibition (ID<sub>50</sub>) of polarization. Five complementary peptides were tested as potential inhibitors of N-acetyl-PGP: RTR, RTRGG, RTR dimer, RTR tetramer, and ASA tetramer. In addition, the RTR